GP-302121

# LOW-PROFILE, MULTI-BAND ANTENNA MODULE


## ABSTRACT OF THE DISCLOSURE

A low-profile multi-band antenna module includes first and second antennas that transmit first and second radio frequency (RF) signals in a first and second RF band, respectively. A first RF multiplexer combines the first and second RF signals for transmission. The first antenna, second antenna, and first RF multiplexer are arranged on a panel. A transmission line communicates with the first RF multiplexer and transmits the first and second RF signals. A second RF multiplexer communicates with the transmission line and separates the first and second RF signals. At least one of the antennas communicates with an amplifier. The transmission line supplies direct current (DC) power to the amplifier. The first and second antenna are arranged on the panel in an orientation that minimizes electrical interference between the first and second antenna. A combination of the first and second antenna minimizes interference between the first and second RF band.